DATAMATION 85

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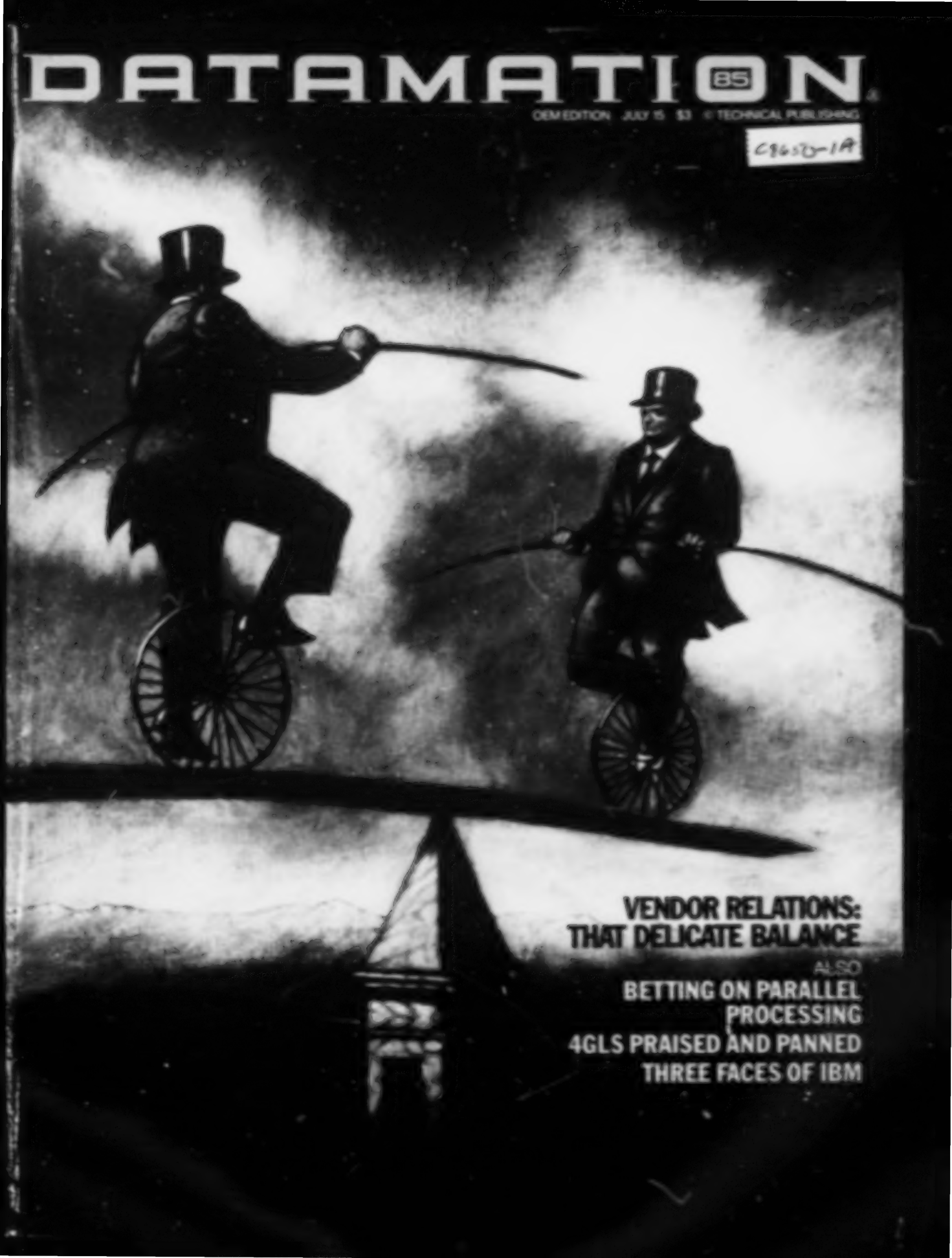

VENDOR RELATIONS: THAT DELICATE BALANCE

ALSO

BETTING ON PARALLEL PROCESSING

4GLS PRAISED AND PANNED

THREE FACES OF IBM

DATAMATION

JULY 15, 1985/$3 U.S.A.
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LETTERS

ATTITUDINIZING

The conclusion of the article "In Search of the Perfect Programmer" (March 15, p. 128) reinforces my theory that the main ingredient of a good programmer is not type but attitude.

The interviewer should spend the time necessary to determine the applicant's productive attitude. It is difficult to hire by type, but quite easy to hire by attitude. The result of hiring by attitude is generally a diverse group of interesting individuals, with at least one thing in common, the need to be productive.

How this group solves its problems is not as important as solving the problems in the scheduled time frame.

ARTHUR McBETH
Conston Inc.
Philadelphia, Pennsylvania

KID STUFF

It was with great pleasure that we read the article by Edith Holmes "DBMS for Kids" (April 15, p. 70). Your readers may be interested to know E. David & Associates had a 3 by 6 VISI-clone for children (called, appropriately enough, Kid Calc) available for TRS-80, Apple, and Commodore 64 computers three years ago.

CARL W. DAVID
E. David & Associates
Storrs, Connecticut

NOT OBSOLETE

While we would like to express our appreciation for your mention of our SideKick software product in "Oil and Water?" (April 15, p. 112), we request that you correct some statements in regard to our product.

First, SideKick was the first RAM resident desktop management package available (there were one or two other nonresident programs available before SideKick was introduced). Second, SideKick was introduced, copy protected, at $54.95. Today, SideKick is also available in a non-copy-protected version, for $84.95.

Third, and most important, SideKick is widely recognized as the best-selling desktop management program on the market today. More than 275,000 copies of the product have been sold since its June 1984 introduction, and Softsel lists SideKick within the top four software products on its weekly "Hotlist."

In addition, we have enhanced SideKick over the past year, and will offer future versions of the product that are likely to enhance the way personal computer users work with desktop management software. SideKick is an evolving product, very much in demand today, and far from obsolete.

ROBIN TYGH
Director of Corporate Communications
Borland International
Scotts Valley, California

Steve Caswell replies:
Sorry for the misunderstanding. I used the word obsolete in comparing SideKick to some other packages that have reached the market with up to 13 more features, not to disparage its position in the market. In fact, the software market operates on name-brand recognition, which makes SideKick the leading package by a large margin. It's the reward for creating a new market category. It's good to hear that you're planning to expand the functionality, though. VisiCalc and WordStar both rested on their laurels and have lost their dominant market positions.

CORRECTIONS

An unfortunate statistical error in the DATAMATION 100 (June 1, p. 36) made it seem that the 1984 revenues of Racal Electronics PLC were down from the company's 1983 revenues: in fact, Racal's revenues were up. Measured in dollars, the revenues were up 14.8%, to $462.7 million from $403 million. In Racal's actual accounting currency, revenues were up 30% to £347 million from £266 million. These figures show that Racal's growth rate from 1983 to 1984 was the sixth highest of non-U.S. companies and that Racal should not have appeared in the "Stunted Growth" chart (p. 39). Racal would move from 51st place to 49th place in the overall rankings

Also, a transposed number in Siemens AG's 1983 revenues inflated this company's growth rate. Measured in dollars, Siemen's 1984 revenues were off 1.1%, to $2.79 billion from 1983's $2.82 billion. In actual accounting currency, Siemen's revenues were up 10.6%, to DM7.95 billion from DM7.19 billion. Siemen's position as number 10 in the DATAMATION 100 ranking is unaffected.

Harris Corp. (p. 101) is still in the terminal business. According to W. Stephen Coleman, Harris's vice president of marketing, "Harris Corp. is committed to the information terminals business and offers leadership products in interactive terminals, remote batch terminals, and distributed data processing systems." Since the beginning of 1985, Harris's Information Terminals Group in Dallas has introduced new products including the Harris 9300 Work Group System and the Harris Challenger Information Display System.

Due to an error in our text processing system, the last paragraph from the Groupe Bull profile was inadvertently inserted into the writeup for Cap Gemini Sogeti (p. 162). Jacques Stern is the chairman of Groupe Bull, not Cap Gemini Sogeti as implied by the misplaced paragraph. The president director general of Cap Gemini Sogeti is Serge Kampf. Also, 27% of Cap Gemini Sogeti's revenues are generated in North America and 73% in Europe. Cap Gemini Sogeti's telephone number in France is (1) 723 61 85.

AT&T was inadvertently omitted from the chart of the leading U.S. dp companies (p. 54). It should have been in 12th place.

N.V. Philips's dp business in 1984 accounted for 6.5% of its total corporate earnings of $16.76 billion. Philips's position in the DATAMATION 100 remains the same.

We apologize for the errors.

In "Wishbook Wonders" (May 1, p. 24) Markline Co.'s 1983 sales figures were transposed: the correct figure is $23 million. Also, according to the company, it does not have a joint venture with Commercial Systems Inc. nor does Commercial Systems Inc. license or participate in the licensing of the Markline Mail Order Software.

A new survey of vars and oems shows that today's hot vertical markets may well cool tomorrow.

HEDGING BETS IN THE OEM MARKET

by Edith Holmes

Larry Fisher, president of Fisher Business Systems Inc., Atlanta, views the current vertical market mania with some amusement. After all, his firm—one of the computer industry's first vertical market software houses—is a veteran in the field after seven years of operation. Drawing on the title and refrain of the popular Barbara Mandrell and George Jones song, Fisher notes, "You might say I was country when country wasn't cool."

Like country and western music, vertical marketing has climbed to the top of the charts after years of obscurity. The phrase is the new tune being hummed by an industry that has begun to mature and thus experience corporate performances that are lackluster at best, given past profits and growth.

But those companies that see vertical marketing as the solution to their present difficulties or the industry's current slump should think twice, according to a just released survey of 2,011 value-added resellers, systems integrators, dealers, and original equipment manufacturers of turnkey computer systems.

Data from the 1985 edition of the *Directory of Systems Houses and Oems* by Technical Publishing Co.'s Sentry Database Publishing unit in Hudson, Mass., show that the success of many market-specific applications swings widely from one year to the next. The numbers indicate that it takes a lot more than selecting a niche of little interest to the computer industry's top performers to make a hit song.

Overall, the vars and oems surveyed—approximately 70% of the total oem/systems house market—did well in 1984, achieving sales to end users of $3.8 billion for a 23% improvement over 1983 revenues of $3.1 billion. And these companies posted this result despite a 9.5% decline in unit shipments of computers, from 171,842 two years ago to 155,574 last year. Whereas the average cost of machines sold through these channels fell between 1982 and 1983, the typical price rose between 1983 and 1984, climbing to $24,430 last year from $18,040.

A closer look at the data, however, reveals that in 1984, dealers, distributors, and commercial oems—23% of those questioned—lost some of their piece of the $3.8 billion pie even though they are more interested in selling vertical systems than ever before. When share is measured in terms of the total value of computers sold, this group saw its portion of the market decline from 20% to 11%. Similarly, software distributors and oems—19% of Sentry's sample—watched their var/oem business drop from 10% to 8%.

On the upswing were hardware/product oems—17% of those surveyed—and systems houses and integrators—41% of those polled—who enjoyed increases in market share from one year to the next of 25% to 31% and 45% to 50%, respectively. The survey data also suggest that systems houses, which sold 7% fewer computers in 1984 than in 1983, charged more for their products, while software distributors and oems, which sold 5% more cpus, lowered the price tags on their offerings.

Further qualifying the reseller market's $3.8 billion performance last year is the fact that fewer new firms entered this field in 1984 than in the previous 13 years. Only 39 firms were formed, the survey shows. Clearly, the average 9% annual growth rate over the last five years is no more. Two thirds of the 2,011 oems and systems houses surveyed opened their doors within the last 10 years. But 1983's expansion rate was only 6%, and the number of vars and oems grew just 2% in 1984.

TYPICAL OEM MATURES

In keeping with the numbers from 1983, the typical oem/systems house is maturing as sales volumes and numbers of employees inch upward. More companies moved into the over $10 million-plus category, a group that now comprises 15% of the firms in the field and accounts for better than 60% of the industry's billings. Thirty-nine percent of the companies surveyed, however, are in the $1.1 million to $10.1 million revenue range, and the remaining 46% have sales of $1 million or less. At the same time, nearly 40% of the firms answering Sentry's ques-

ILLUSTRATION BY DAVID FEBLAND

tionnaire had fewer than 50 employees.

This field still belongs to the small- to medium-sized organizations, and that's not all bad. "There's no [General Motors] in our business yet," says Fisher, a former [illegible], "and that means opportunity."

But the lack of dominant forces in the field means opportunity only if vertical applications are selected with care. Too often, today's boom is tomorrow's bust. A look at the nine broad applications categories used by the surveyors shows that, unquestionably, general business and accounting packages have been king for the last four years and are likely to continue to reign for the forseeable future (see Fig. 1). The number of systems configured for these applications held up even during the 1981-82 recession, grew steadily between 1982 and 1983, and flattened out at a level well above figures for the other vertical categories between 1983 and 1984. Further, seven out of the 10 most popular applications for vars in 1984 came from the general business and accounting group (see Fig. 3). All of the specific applications within this category posted gains in the number of shipments last year.

Special business applications, too, withstood the recession three years ago and have grown another 74% since then. Most individual applications within this group tended to decline in terms of number of shipments between 1983 and 1984, however. The decline affected special business packages, as well as applications in the industrial control, test, and measurement; manufacturing/production control; communications; health/medical services; scientific/engineering; and the catchall "other" categories. Only the typesetting and word processing category showed an increase in the number of systems sold to end users. The numbers suggest that industrial control, test, and measurement and scientific/engineering applications are particularly rough fields in which to market vertical solutions. Industrial control packages, for example, have never reestablished their prerecession system shipment level.

Within these broad categories, the 10 fastest growing and the 10 shrinking end-user markets from 1983 to 1984 show just how fickle these vertical markets can be (see Fig. 2). Last year's survey indicated, for instance, that blood analysis/blood bank accounting applications came close to hitting bottom; data from 1982 to 1983 illustrated a 73.3% decline in system shipments. But this year, these applications lead the chart of the fastest growing end-user markets—up 108.6% in systems sold.

This same wild swing can be seen in several vertical markets. Take medical di-

FIG. 1

TOTAL VAR MARKET BY BROAD APPLICATION CATEGORIES—1984

	NO. OF SYSTEMS/% OF TOTAL			
MARKET	1981	1982	1983	1984
General Business/ Accounting	674,412 28.5	692,757 37.1	1,019,169 28.7	1,146,645 32.3
Special Business Applications	170,378 7.2	248,679 13.2	429,684 12.1	429,548 12.1
Industrial Control, Test, Measurement	246,101 10.4	100,832 5.4	241,475 6.8	184,599 5.2
Manufacturing/ Production Control	487,470 20.6	240,877 12.9	538,217 15.1	518,298 14.6
Communications	132,516 5.6	115,770 6.2	252,129 7.1	220,099 6.2
Typesetting & Word Processing	82,823 3.5	113,903 6.1	196,311 5.5	205,899 5.8
Health/Medical Services	111,217 4.7	89,729 4.8	227,271 6.4	223,649 6.3
Scientific/Engineering	92,283 3.9	46,681 2.5	95,980 2.7	81,650 2.3
Other Applications	389,152 15.6	220,337 11.8	553,973 15.6	539,596 15.2
Total Systems	2,366,361	1,867,270	3,631,109	3,549,984

FIG. 2

FASTEST GROWING END-USER MARKETS FROM 1983 TO 1984

MARKET	% CHANGE
Blood analysis/blood bank accounting	+ 108.6
Membership organization accounting	+ 81.2
Court administration/jury management	+ 67.8
Real estate listing/analysis	+ 38.6
Spectroscopy	+ 25.7
Telephone management/answering systems	+ 25.4
Management information	+ 23.6
CPA client write-ups/billing	+ 23.3
Plotting, drafting, mapping	+ 21.0
Data entry (shared processors)	+ 16.3

SHRINKING END-USER MARKETS FROM 1983 TO 1984

MARKET	% CHANGE
Traffic control	- 74.0
Ticketing for sporting/entertainment events	- 66.3
Magazine circulation list management	- 55.3
Videotape editing/control	- 50.3
Aircraft/aerospace simulators	- 49.1
Energy management, power demand control	- 36.5
Teleconferencing	- 32.9
Process control	- 30.6
Automatic test equipment	- 30.3
Travel/tour systems	- 30.1

agnosis—up 344% in 1983 and down 8.4% in 1984. Or energy management, power demand control—up 76.8% two years ago and down 36.5% last year. Or process control—up 117.5% in the last survey and down 30.6% in this one. Similarly, stock/securities accounting, down 86.7% in systems sold in 1983, posted shipment gains of 15.3% in 1984. Looking on the bright side, none of these vertical applications went as far up or down in shipments last year as they did two years ago.

10,000 IS MAGIC NUMBER

The message is clear: it is essential that vars choose their applications carefully or risk losing a great deal. Because so many of the firms in this business are small, the cost of a mistake may well be the company itself. When selecting a market, "10,000 is the magic number of potential customers," advises Mark Singleton, president and ceo of Complete Office Information Networks, a Norcross, Ga., firm specializing in financial calculation software. After that, the keys are commitment and marketing. "Don't dabble in an industry; live, breathe, and eat that market," says Singleton. Adds Fisher of Fisher Business Systems, "The days of the best or a better mousetrap are over. Beyond an easy-to-use product with good documentation, the var must provide end users with market support in the form of demonstrations, videotapes, and seminars, a justification for buying the vertical system, and an in-depth knowledge of the user's industry."

Still another piece of advice offered by those in the var business is to build a vertical solution around reliable, recognized hardware. And, indeed, sales of minicomputers and personal computers through oems and systems houses reflect that philosophy. The Sentry survey shows Digital Equipment Corp.'s machines in first place in the mini category with 39.4% of the field, and IBM 11 percentage points away in second place with 28.4% of the market among those polled (see Fig. 4). The total number of minis shipped by the survey respondents in 1984 was 40,567, nearly double the 20,424 machines sold a year earlier. Meanwhile, IBM has taken the lead in the personal computer oem market with a 21.4% share (see Fig. 5). Big Blue's nearest competitor is Commodore with 10% of this market, according to the survey. Some 115,007 personal computers were sold through systems houses and oems last year, up substantially from the 67,732 micros shipped by survey participants in 1983.

This year IBM's position in the oem market for minis may well strengthen. The

FIG. 3
TEN MOST POPULAR APPLICATIONS FOR VARS

	1984 UNIT SHIPMENTS	% CHANGE
General accounting (receivable, payable, ledger, payroll)	417,714	+14.8
Word processing	103,140	+10.1
Order entry	99,779	+12.9
Billing/invoicing	96,255	+14.0
Mail list/label processing	95,405	+ 9.2
Database management	93,537	+ 9.2
Sales analysis/forecasting	90,254	+ 5.2
Electronic mail	76 094	+ 8.6
Inventory control	73,097	+ 2.8
Management information	71,246	+ 2.4

FIG. 4
MINICOMPUTER SALES VIA OEMS

	PERCENT SHARE OF MINICOMPUTERS SOLD VIA SYSTEMS HOUSES/OEMS				
MANUFACTURER	1980	1981	1982	1983	1984
Corona Data Systems	—	—	—	—	2.5
Data General	21.6	21.5	11.5	6.1	3.4
Datapoint	2.0	4.2	4.1	3.0	1.3
Digital Equipment	43.5	48.4	42.8	28.4	39.4
Hewlett-Packard	5.2	6.0	7.2	3.9	1.6
IBM	5.4	3.2	4.7	14.5	28.4
Prime	1.5	1.5	11.0	1.4	1.6
Texas Instruments	2.1	1.8	5.5	2.3	3.8
Wang Laboratories	—	—	—	3.9	3.1
All Others	16.9	10.9	11.8	26.9	14.9
Total Sample (units shipped)	14,066	14,483	13,440	20,424	40,567

FIG. 5
PERSONAL COMPUTER SALES VIA OEMS

	PERCENT OF PERSONAL COMPUTERS SOLD VIA SYSTEMS HOUSES/OEMS				
MANUFACTURER	1980	1981	1982	1983	1984
Altos Computer	—	—	4.9	4.6	3.2
Apple	48.7	37.9	20.3	4.9	7.1
Columbia Data Products	—	—	—	1.4	2.1
Commodore	5.9	6.5	5.4	10.3	10.0
Corona Data Systems	—	—	—	3.5	2.2
Cromemco	1.7	2.1	2.4	4.9	2.4
Digital Equipment	—	—	1.0	11.4	6.2
Hewlett-Packard	—	—	—	1.0	1.1
IBM	1.5	3.7	11.3	9.1	21.4
Keypro	—	—	—	2.2	1.8
Northstar	2.1	4.3	6.1	4.9	2.8
Radio Shack	—	1.9	1.2	1.0	4.3
Televideo	—	—	3.5	8.5	4.9
Texas Instruments	—	—	3.3	4.3	5.7
Wang Laboratories	—	—	—	—	4.0
Xerox	—	1.2	3.4	2.0	6.8
Zenith	—	—	—	—	1.2
All Others	40.1	40.9	36.2	21.1	12.8
Total Sample (units shipped)	18,186	21,750	36,792	67,732	111,007

The fastest growing and shrinking end-user markets show just how fickle these vertical markets can be.

company clearly began to close in on DEC in 1984, increasing its share by 14% compared to Digital's 11%. Texas Instruments trailed far behind these leaders in third place with a 3.8% piece of the market, and Data General was next in line with a 3.4% share—declines for both firms from 1983's survey results. Hewlett-Packard's position continued to weaken last year, as well, dropping to 1.6% from 3.9% in 1983.

In stealing the march on the oem market for micros, IBM boosted its 1983 share of 9.1% by another 12.3%; two years ago, DEC was the leader with an 11.4% share. DEC's piece of the pie shrank in 1984 to 6.2%, as the company backed away from selling its micros to end users through retailers. Several other firms lost share, too, including Altos Computer Systems, a company that has long cultivated the oem world with equipment geared to solving vertical problems. Altos went from 4.6% of this field in 1983 to 3.2% in 1984. TeleVideo suffered a more serious decline, falling from an 8.5% share to 4.9%.

Apple Computer improved its lot in the market for personal computers, however, rebuilding its relations with various distribution channels and increasing its share from 4.9% in 1983 to 7.1% last year. In the meantime, despite efforts to bolster its oem sales, Hewlett-Packard showed a disappointing rise from 1% to 1.1%. Tandy Corp.'s Radio Shack division did better, though; according to the survey, the firm gained a 4.3% market share in 1984, compared with its 1% standing a year earlier. And Wang Laboratories and Zenith appeared for the first time on the systems houses/oems micro sales chart with 4% and 1.2% shares, respectively.

Matching their performance between 1982 and 1983, oem peripheral sales moved ahead another 32% last year (see Fig. 6). All told, 645,228 devices of all types were sold in 1984 by survey participants. Printers top the list of peripheral sales last year at 216,512 units, up 55% over the earlier year, followed by crt terminals and monitors at 203,648, up a whopping 213% compared with 1983. The only declines posted by survey respondents were for 14-inch Winchester drives, down 2%; reel-to-reel drives, down 3%; and digital plotters, down 25%.

FIG. 6
PERIPHERALS SALES VIA OEMS

TYPE OF PERIPHERAL	QUANTITY SOLD VIA OEMS 1981	1982	1983	1984	% CHANGE
Printers					
Dot matrix	51,156	68,994	82,999	120,747	+ 45
Letter-quality (daisywheel, thimble)	—	20,524	25,761	45,713	+ 77
Line printers (under 300 lpm)	8,710	6,494	7,860	12,775	+ 63
Line printers (300 lpm & up)	6,833	6,581	8,270	15,691	+ 90
Teleprinter terminals (with keyboard)	27,633	19,403	14,830	21,586	+ 46
Group Total	**94,382**	**121,996**	**139,720**	**216,512**	**+ 55**
Disk Drives					
3½-inch floppy disk drives	Not covered in previous years			34,614	—
5¼-inch floppy disk drives	Not covered in previous years			92,388	—
8-inch Winchester drives	4,558	8,423	6,843	15,584	+128
14-inch Winchester drives	—	3,690	4,671	4,594	– 2
Fixed disk drives	682	3,675	4,466	18,349	+311
Removable disk drives	11,197	8,958	7,610	19,234	+153
Group Total	**57,673**	**83,549**	**94,588**	**184,763**	**+ 49**
Tape Drives					
Cassette/cartridge drives	4,444	6,708	8,106	10,454	+ 29
Reel-to-reel drives	4,323	4,296	6,463	6,256	– 3
Group Total	**8,767**	**11,004**	**14,569**	**16,710**	**+ 15**
Crt Terminals/ Monitors					
Alphanumeric	89,008	96,007	52,147	177,188	+240
Graphic	5,578	8,006	12,816	26,460	+106
Group Total	**94,586**	**104,013**	**64,963**	**203,648**	**+213**
Other					
Memory expansion boards	13,034	14,643	7,558	31,276	+314
Digital plotters	773	1,205	3,093	2,319	– 25
Group Total	**13,807**	**15,848**	**10,651**	**33,595**	**+215**

LEADER IN DOT MATRIX

Okidata led the dot matrix printer category with 24.9% of the oem market (see Fig. 7). Although this represents a 4.3% decline from the earlier year, Okidata's nearest competitor is still several percentage points away and has other problems to contend with: Epson America posted an 11.1% share of oem dot matrix sales—as well as a first time 10% share of the letter-quality printer sales—but the firm must now contend with the loss in May of IBM as a major customer.

NEC continues to lead in letter-quality printers with a 23.4% share, though this company, too, experienced a slip of 8.2 percentage points between 1983 and 1984. Next in line is Diablo, another firm that faced declining sales and layoffs last year, with a 14.4% showing. In the category of line printers under 300 lines per minute, Dataproducts wrested first place from Oki-

Two new categories were included for the first time: 3½- and 5½-inch floppy disks.

data, expanding its market share from 15.6% to 20.1% while its competitor fell from 17.5% to 10.9%, according to the survey. IBM appeared in this printer category for the first time last year, capturing a 3.3% share. Dataproducts lost share in the field for printers operating at 300 lines per minute and up, dropping from 13.6% to 10.1%. Another big loser in this category was Printronix, which gave up its 26% leadership in this field to a newcomer: Fujitsu showed up for the first time and won top billing with a 12.7% share. Meanwhile, Texas Instruments took the lead from DEC in teleprinter terminals with keyboards, boosting its share from 18.9% to 23%. DEC plunged from 32.6% of this market in 1983 to just 6.7% last year.

The Sentry survey included two new categories for the first time: 3½-inch and 5½-inch floppy disk drives (see Figs. 8 and 9). Survey respondents put Shugart solidly in the lead in the 3½-inch category with 29.6% of the 34,614 drives sold, while IBM edged into first place in the 5½-inch field with 14% of the 92,388 drives shipped. Shugart was number one again for 8-inch Winnies with a 35.7% share (see Fig. 10). Fujitsa followed a distant second with 10%. The Japanese company has a firm grip on the 14-inch Winnie and fixed disk drive markets, though. Its piece of these fields was 13.1% and 28.6%, respectively, the survey said. In removable disk drives, Tandem is king with 52.1% of the market, which was up 153% last year.

Several new companies entered the market for cassette/cartridge tape drives in 1984, appearing in the survey for the first time (see Fig. 11). Among these firms are Alloy Engineering, Data General, Syquest, and Tanberg Data. Also new, Cipher Data Products jumped in and captured an 18% share, thus challenging Kennedy, the category leader with 20.4% of this market. Cipher Data won the lead in the reel-to-reel tape drive category, beginning with a 7.3% share in 1983 and seizing 29.5% of the market last year, despite declining shipments. New to the oem market for reel-to-reel drives, Kennedy is next in line with a 10.9% share.

Both alphanumeric and graphic terminals and monitors posted a strong showing in shipments for 1984, according to the survey, up a total of 213% (see Fig. 12). Evenly divided among several vendors, the market for alphanumeric crts is led by TeleVideo with 12.8%, Zenith Data Systems with 10.6%, and Digital Equipment Corp. with 10%. The graphic terminal category saw three new entrants in 1984—Adage, which captured a 1.6% share of the market; Amdek, which became the leader

FIG. 7

DOT MATRIX PRINTER MARKET SHARE

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Anadex	—	7.1
Apple Computer	—	1.3
C. Itoh	—	1.9
Dataproducts	15	1.4
Datasouth	3.8	2.2
Digital Equipment	6.0	5.1
Epson America	10.3	11.1
IDS	—	1.9
Juki	—	5.0
Mitronics	—	6.6
Okidata	29.2	24.9
Printronix	1.2	1.6
Star Micronics	6.1	4.5
Texas Instruments	7.5	5.9
All others	34.4	19.5
Total Units	82,900	120,747

FIG. 8

3½-INCH FLOPPY DISK DRIVE MARKET SHARE

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Apple Computer	This category not included in previous years.	19.9
Hewlett-Packard		2.1
Micro-Sci		2.9
Mitsubishi		1.4
North Star Computers		2.9
Shugart		29.6
Tandon Magnetics		4.3
All others		36.9
Total Units		34,614

FIG. 9

5½-INCH FLOPPY DISK DRIVE MARKET SHARE

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Apple Computer	This category not included in previous years.	2.9
Control Data		12.0
Digital Equipment		2.5
IBM		14.0
Shugart		12.4
Tandem		1.1
Tandon Magnetics		11.0
Teac		1.5
Verbatim		10.8
All others		31.8
Total Units		92,398

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OEM EDITION

The vars and oems surveyed—about 70% of the total oem/systems house market—did well in 1984.

FIG. 10

8-INCH WINCHESTER DRIVE MARKET SHARE

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Ateel	—	1.9
Control Data	2.4	3.3
Data General	1.7	1.1
Digital Equipment	1.3	1.3
Fujitsu	9.9	10.0
IBM	—	2.4
NEC	2.8	3.4
Qume	—	2.6
Shugart	15.3	35.7
All others	66.6	38.3
Total Units	6,843	15,584

FIG. 11

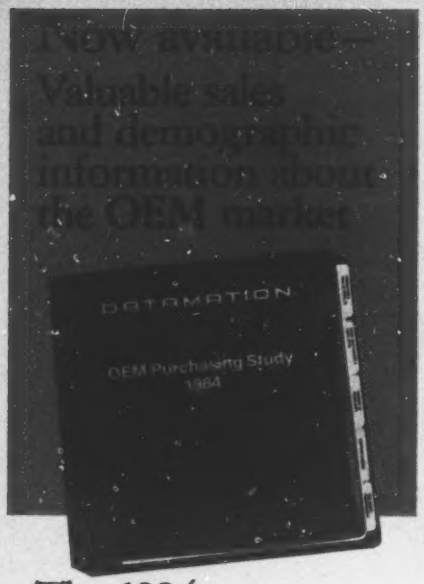
TAPE DRIVE MARKET SHARE

CASSETTE/CARTRIDGE TAPE DRIVES

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Alloy Engineering	—	1.7
Archives	17.4	10.0
Cipher Data Products	—	18.0
Commodore	13.4	6.1
Control Data	1.2	2.1
Data General	—	1.5
Digital Equipment	12.1	1.3
Hewlett-Packard	4.0	1.8
Kennedy	2.6	20.4
Syquest	—	1.4
Tanberg Data	—	1.9
All others	49.3	33.8
Total Units	8,106	10,454

REEL-TO-REEL TAPE DRIVES

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Cipher Data Products	7.3	29.5
Data General	4.5	6.8
Digital Equipment	8.5	6.0
Fujitsu	—	2.1
Hewlett-Packard	6.0	4.4
IBM	2.0	2.8
Innovative Data	4.0	4.0
Kennedy	8.5	10.9
Memorex	—	4.8
STC	—	1.3
All others	59.2	27.4
Total Units	6,463	6,256



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OEM EDITION

Some 115,007 pcs were sold through systems houses and oems last year, up substantially from 1983.

FIG. 12

CRT TERMINALS MARKET SHARE

ALPHANUMERIC CRT TERMINALS

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Adds	4.9	8.0
Data General	1.6	1.8
Digital Equipment	13.7	10.0
Electrohome Ltd.	3.3	2.8
Hazeltine	3.5	2.7
Hewlett-Packard	—	1.1
IBM	1.2	3.0
Lear Siegler	5.1	3.1
Micro Term	3.4	2.5
Televideo	16.5	12.8
Texas Instruments	2.7	2.8
Visual Technology	2.1	1.5
Wyse	—	4.5
Zenith Data Systems	5.1	10.6
All others	36.9	32.8
Total Units	152,147	177,188

GRAPHIC CRT TERMINALS

MANUFACTURER	1983 OEM MARKET SHARE (%)	1984 OEM MARKET SHARE (%)
Adage	—	1.6
Adds	4.9	2.4
Amdek	—	22.9
Aydin Controls	4.8	2.9
Digital Equipment	5.0	2.0
IBM	—	2.2
Intecolor	3.9	1.9
Visual Technology	7.5	4.5
All others	73.9	59.6
Total Units	12,816	26,460

with 22.9% of the field; and IBM, which won a very modest 2.2% piece of the pie.

Otherwise, the Sentry survey shows an explosion in sales of memory expansion boards from 7,558 units shipped in 1983 to 31,276 sold last year, a 314% increase. Again, the market is fairly evenly divided among several vendors, though AST holds the lead with a 10% share. According to the survey, the substantial growth in memory products attracted three new firms to the field last year: Alpha Micro, Persyst, and Quadram.

While sales of memory expansion boards were way up, shipments of digital plotters fell from 3,093 units in 1983 to 2,319 units last year. In the meantime, Hewlett-Packard took the lead in this field from Houston Instrument, upping its 11% 1983 share to 28.1% while Houston Instrument saw its share tumble from 30% two years ago to 14%.

On the whole, the survey data reflect a flattening market for computers and peripherals. The immediate effect is a lower growth rate than the industry has seen in the past and, in some cases, even a decline. In the long run, there will be fewer oems and vars—all the more reason to avoid panaceas like vertical marketing. The numbers show what those in the business for a time already know: there is no quick fix to the current downturn, and vertical markets, while potentially very profitable, demand considerable management skill. ◉

The 1985 *Directory of Systems Houses and Computer Oems* lists 2,011 companies in alphabetical order, by location, and by primary cpu vendor. It is available from Technical Publishing, 5 Kane Industrial Drive, Hudson, MA 01749.